

flounder. Relative to other core groups, there were low numbers of pink shrimp, pigfish, red drum, and summer flounder. Gulf flounder and black sea bass had their lowest class means in this area. Juvenile gag was absent. Even though not very abundant, spotted seatrout, weakfish, and silver perch had their highest class means in these areas. Species groups present in this core group were I and III (Table 23).

Qualitative sediment size was available for 88% of the stations in this core group. Of those, 79% had mud bottoms, 15% had sand bottoms, 3% were sandy-mud, and 3% had a mixture of mud and shell. Compared to the low salinity core station group, this core group had a few more stations (14) with a sand bottom and 12% fewer mud bottom stations. Information on the presence or absence of vegetative matter was available for 59% of the stations in this core group. Of those stations, 87% had some type of grass, detritus, and/or algae present. As with the stations in the low salinity areas, widgeon grass would be the dominant grass present. Bryozoans and tunicates were noted at a few stations.

Water depth was 2 m or less in 81% of the stations where depth was recorded. There was no difference between the low salinity core group and the Pamlico Sound core group in the distribution of depths, with 80% of the stations having less than or equal to two meters, 18% between 2.1 and 4.0 meters, and only 2% greater than four meters.

Transitional Zones

At the mouths of both the Pamlico and Neuse rivers and in the northwestern bays of Pamlico Sound, transitional zones existed in terms of salinity, temperature, as well as in species composition. Half of the stations had abiotic and biological characteristics of the low salinity core group, and the other half had characteristics more like those bays influenced by Pamlico Sound. Thirty percent of the stations used in analysis were characterized into this core group.

Outer Banks North of Cape Hatteras

Although there was a very small sample size for this core group (2%), it did exhibit distinct mean salinities ranging from 14.7 ppt (April) to 18.0 ppt (May) to 18.6 ppt (June). Temperatures for these months were 16.1°C, 22.1°C, and 26.4°C, respectively.

Species composition was very similar to the juvenile populations along the Outer Banks south of Cape Hatteras and Core Banks. Species group II was dominant. Pinfish was the most abundant species. There were also good numbers of pink shrimp, blue crab, and pigfish. Pink shrimp, black sea bass, gag, pigfish, pinfish, red drum, and gulf flounder had their highest class means here. Brown shrimp, bluefish, silver perch, Atlantic croaker, and southern flounder had their lowest class means here, and weakfish was absent.

All of the stations behind the Outer Banks (north and south of Cape Hatteras) were less than or equal to two meters in depth.